Chicago Climate Exchange®



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What is Chicago Climate Exchange?

Chicago Climate Exchange (CCX®) is the world's first and North America's only voluntary, legally binding pilot greenhouse gas reduction and trading program for emission sources and offset projects in North America and elsewhere.

CCX Members

Aerospace and Equipment

Rolls-Royce

Automotive

Ford Motor Company

Chemicals

Dow Corning

DuPont

Diversified Manufacturing

Bayer Corporation

Interface, Inc.

Ozinga Bros

Electric Power Generation

American Electric Power

Central Vermont Public Service

Green Mountain Power

Manitoba Hydro

TECO Energy, Inc.

Electronics

Motorola, Inc.

Environmental Services

Waste Management, Inc.

Food Processing

Premium Standard Farms

Forest Products

Abitibi-Consolidated

Aracruz Celulose S.A.

International Paper

Klabin S.A.

MeadWestvaco Corp.

Stora Enso North America

Temple-Inland Inc.

Information Technology

IBM

States, Municipalities

State of New Mexico

City of Boulder

City of Chicago

City of Oakland

City of Portland

CHICAGO CLIMATE EXCHANGE, INC

Pharmaceuticals

Baxter Healthcare

Private University

Tufts University

Public Universities

The University of Iowa

University of Minnesota

The University of

Oklahoma

Recreation

Aspen Skiing Company

Semiconductors

ST Microelectronics

Steel

Roanoke Electric Steel

Corp.

Transportation

Amtrak

CCX Associate Members

Architecture/Planning

Mithun, Inc.

Associations

Confederation of British Industry

Brokerage Services

Amerex Power

Consulting

Domani LLC

Global Change Associates

Natural Capitalism, Inc.

Rocky Mountain Institute

Energy and Management Services

Airtricity

Orion Energy Systems Ltd

Sieben Energy Associates

Thermal Energy International

Engineering

Vanasse Hangen Brustlin, Inc.

Financial Services

Access Industries, Inc. MB Investments, LLC

Information Technology

Open Finance LLC Intercontinental Exchange

Legal Services

Foley & Lardner

Non-Governmental Organization

American Coal Ash

Association

American Council on

Renewable Energy

Delta Institute

Houston Advanced

Research Center

Midwest Energy

Efficiency Alliance

World Resources Institute

Private College

Presidio World College

Risk Management

The Professional Risk Managers' International

Religious

Association

Organization

Jesuit Community of Santa Clara University

Retiring/Offsets

Carbonfund.org

SRI Fund

Pax World

Technology

Millennium Cell Polar Technology

TerraPass

CHICAGO CLIMATE EXCHANGE, INC.



CCX

Participant Members

Offset Aggregator

Iowa Farm Bureau

Environmental Credit Corp.

First Capitol Ag Group

The Delta Institute

North Dakota Farmers Union

Offset Provider

Resource Technology Corp.

Restoration Soil & Research, Ltd.

Sustainable Forestry Management, Ltd.

Selected Liquidity Providers

AGS Specialists LLC

Calyon Financial, Inc.

Thomas H. Dittmer

First New York Securities LLC.

Goldenberg, Hehmeyer & Co.

ICAP Energy LLC

Liquidity Providers Cont.

Christopher J. Johnson

Kottke Associates, LLC

The League Corporation

Marquette Partners, LP

Glenn M. Miller

Douglas M. Monieson

Natsource LLC

Peregrine Financial Group

Brian Rice

Serrino Trading Company

Shatkin Arbor, Inc.

Swiss Re

C. Richard Stark, Jr.

Jeffery B. Stern

Lee B. Stern

TradeLink LLC

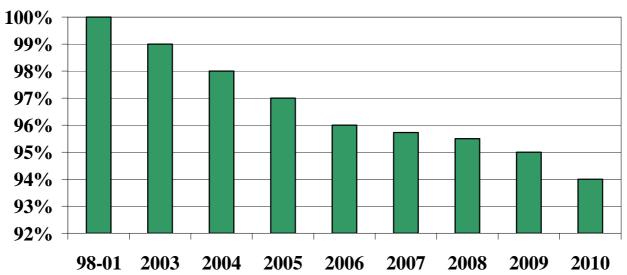
Tradition Financial Services

TransMarket Group LLC

CCX Market Architecture (2003-2010)

Phase I: Members make a legally binding commitment to reduce or trade 1% per year from 2003-2006, for a total of 4%, below a baseline avg of 1998-2001. Phase II: Members make a legally binding commitment to reduce 6% below baseline by 2010.

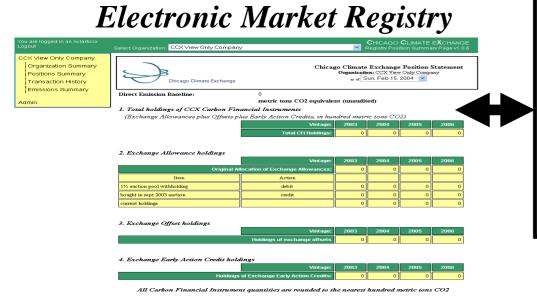




- ➤ Independent standardized verification—important value
- Annual true-up
- Pre-defined offset projects
 - > Sequestration: reforestation, agricultural soils
 - Landfill and agricultural methane destruction



CCX® Comprehensive Market Structure

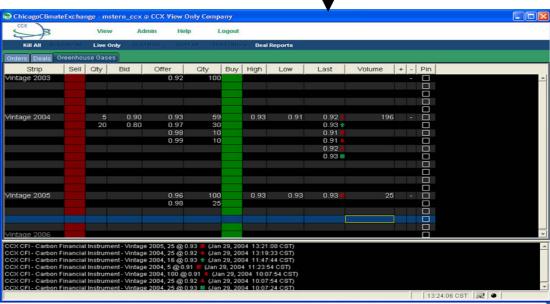


Comprehensive Rules System

- •Emitters: Standard baseline, multi-year allowance stream equal to reduction targets
- Offset Providers (project credits)
- Liquidity Providers
- Associate Members

‡

Webaccessible Electronic Trading Platform



<u>CHICAGO CLIMATE EXCHANGE, INC</u>

CCX Offset Rules, Processes

- General: if the offsets from the proposed project is owned by an entity with significant direct emissions (>10,000 tpy), then that entity must become a full-fledged CCX member
- Conservative crediting discounts, but less admin cost
- All Offsets have value equal to each other and to allowances
- Offsets Committee has full discretion to approve or not
- All projects verified by designated entities, review by NASD
- Once approved, issuance can be handled by staff, report to committee
- Forestry Committee reviews specific forest project rule issues
- Clear ownership must be established

CCX Offset Project Verification

- CCX Rules define eligible projects, verification requirements
- Each project must be approved by CCX Offsets Committee
- All verification reports examined by NASD

CCX-Approved project verifiers

Forestry Projects

BVQI

SGS (Societe General de Surveillance)

Landfill Methane Projects

Det Norske Veritas (NV)

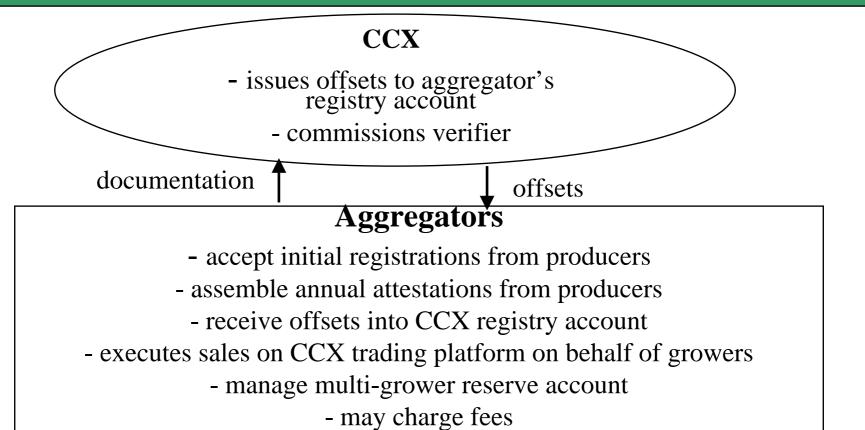
First Environment, Inc.

Agricultural Soil and Agricultural Methane Projects

SES Inc.



Mechanics of Ag Offset Aggregation in CCX®



documentation

sales proceeds

Individual Growers

- register; undertake actions as per 4-year contract; sign annual attestations; allow access to CCX verifiers



CCX Offset Projects Enrolled

- Landfill methane: Waste Management (IN, TX)
- Agricultural methane: Environmental Credit Corp., Premium Standard Farms (MN, WA, TX)
- Agricultural soils: Iowa Farm Bureau, Delta Institute (midwest)
- Reforestation: Precious Woods (Costa Rica)
- Fuel switching: IdleAire (CA, TX)
 - Offsets equal to approximately
 1 million metric tons CO₂ generated to date

CCX Ag Methane Project Rules

- Collection/combustion projects placed into service after 12-31-98
- Can be covered lagoon or digester (tank system)
- Crediting period is 2003-2006 (initial)
- Crediting rate: 18.25 metric tons CO₂ per ton of methane combusted
- Verification requirements:
 - project start date, ownership
 - gas flows, meter calibration
 - methane content (or use conservative defaults) or implied methane burn based on electricity production



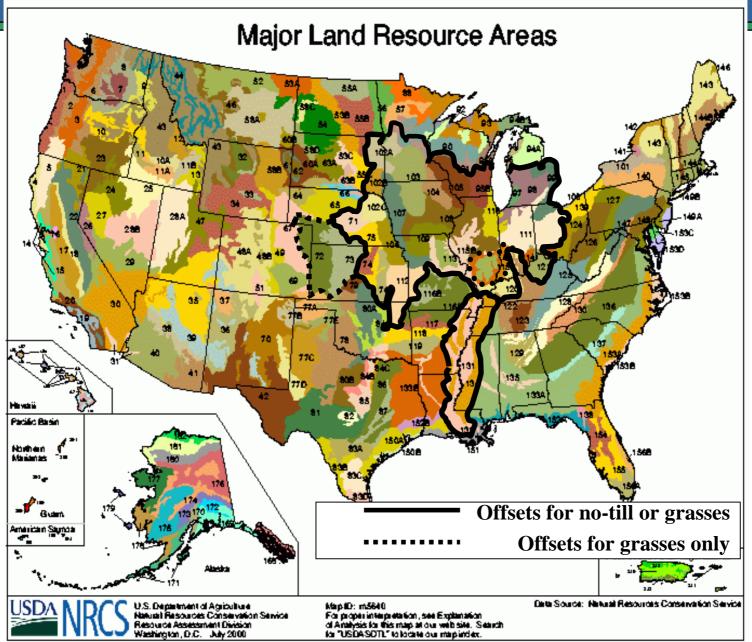
Agricultural soil sequestration offsets in CCX®

- Focus first on well-documented actions with clear ownership
- CCX Special Committee on soil carbon provided guidance on annual carbon gains, geography

- Simplified crediting: verify practices, credit at discount issuance quantities:
 - Continuous no-till (2003-06) in central U.S.:
 - 0.5 metric tons CO₂/acre/yr
 - Grasses, planted after 1-1-99, central U.S.:
 - 0.75 metric tons CO₂/acre/yr



U.S. Central Region for CCX® Agricultural Soil Offsets





Global Carbon Stocks and Flows

• Annual global emissions: 30 billion metric tons CO₂

• US emissions ~ 6 billion metric tons CO₂

Carbon stored in forests
 2,200 billion metric tons CO₂

- Forests store 74 years worth of global emissions!!
- Carbon stored in top meter of soils: 5,500 billion metric tons CO₂
- Soils store 183 years worth of global CO₂ emissions!!
- Bottom line: massive potential for win-win carbon mitigation through forest and soil sequestration.



Emissions Displacement Credits vs. Methane Destruction Credits

CCX rules allow for two potential revenue streams from digesters/covered lagoons:

- 1. Methane Destruction Credits: Credits stemming from the combustion/destruction of methane or the use of methane for energy or heat.
- 2. Emission Displacement Credits: Credits generated from the displacement of fossil fuel emissions on the electricity grid.

Owners of eligible projects may receive credit for methane destruction with or without ownership of emission displacement credits.

Frequently Asked Questions

Q: Is my project still eligible if I sell the energy generated to an outside party?

Q: What if I sell the energy as "green energy"?

Q: Can I sell my credits into the European Emissions Trading Scheme?

Q: What kind of documentation do I need to provide in order to receive credit?

Q: How many offset credits will I get?

Q: How much money will I receive for my credits?